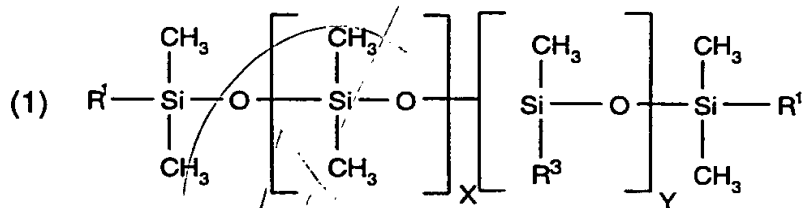


## WHAT IS CLAIMED IS:

1. A method of use of a fabric softener composition for the wrinkle recovery treatment or the reduction of wet soiling of textile fibre materials in domestic applications, which softener composition comprises:

- A) a fabric softener;
- B) at least one additive selected from the group consisting of
  - a) a polyethylene, or a mixture thereof,
  - b) a fatty acid alkanolamide, or a mixture thereof,
  - c) a polysilicic acid, or a mixture thereof, and
  - d) a polyurethane, or a mixture thereof; and
- C) a dispersed polyorganosiloxane of formula (1)

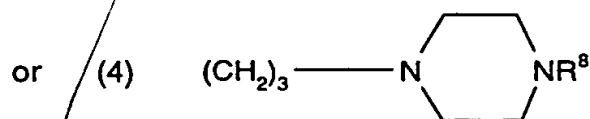
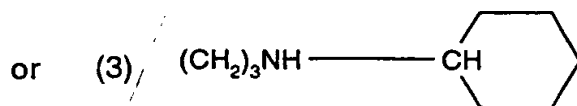
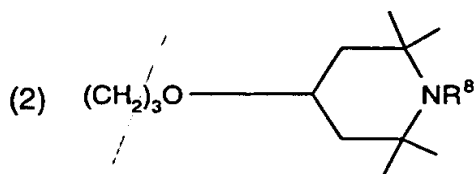


wherein

$R^1$  is OH,  $OR^2$  or  $CH_3$

$R^2$  is  $CH_3$  or  $CH_2CH_3$

$R^3$  is  $C_1$ - $C_{20}$ alkoxy,  $CH_3$ ,  $CH_2CHR^4CH_2NHR^5$ , or  $CH_2CHR^4CH_2N(COCH_3)R^5$



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$R^4$  is H or  $CH_3$

$R^5$  is H,  $CH_2CH_2NHR^6$ ,  $C(=O)-R^7$  or  $(CH_2)_z-CH_3$

$z$  is 0 to 7

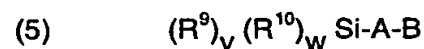
$R^6$  is H or  $C(=O)-R^7$

$R^7$  is  $CH_3$ ,  $CH_2CH_3$  or  $CH_2CH_2CH_2OH$

$R^8$  is H or  $CH_3$

the sum of  $X$  and  $Y$  is 40 to 4000;

or a dispersed polyorganosiloxane which comprises at least one unit of the formula (5)



wherein

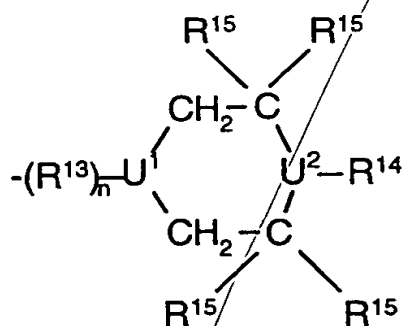
$R^9$  is  $CH_3$ ,  $CH_3CH_2$  or Phenyl

$R^{10}$  is  $-O-Si$  or  $-O-R^9$

the sum of  $v$  and  $w$  equals 3, and  $v$  does not equal 3

$A = -CH_2CH(R^{11})(CH_2)_k$

$B = -NR^{12}((CH_2)_l-NH)_mR^{12}$ , or



(6)

$n$  is 0 or 1

when  $n$  is 0,  $U^1$  is  $N$ , when  $n$  is 1,  $U^1$  is  $CH$

$l$  is 2 to 8

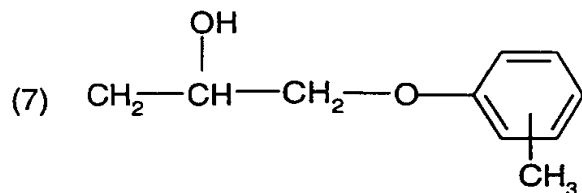
$k$  is 0 to 6

$m$  is 0 to 3

$R^{11}$  is H or  $CH_3$

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$R^{12}$  is H,  $C(=O)-R^{16}$ ,  $CH_2(CH_2)_pCH_3$  or



$p$  is 0 to 6

$R^{13}$  is NH, O,  $OCH_2CH(OH)CH_2N(\text{Butyl})$ ,  $OOCN(\text{Butyl})$

$R^{14}$  is H, linear or branched  $C_1-C_4$  alkyl, Phenyl or  $CH_2CH(OH)CH_3$

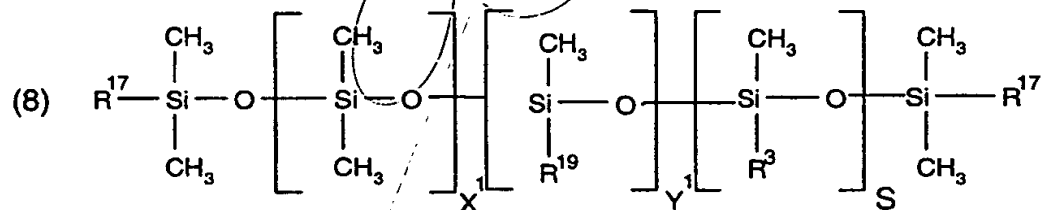
$R^{15}$  is H or linear or branched  $C_1-C_4$  alkyl

$R^{16}$  is  $CH_3$ ,  $CH_2CH_3$  or  $(CH_2)_qOH$

$q$  is 1 to 6

$U^2$  is N or CH;

or a dispersed polyorganosiloxane of the formula (8)



wherein

$R^3$  is as previously defined

$R^{17}$  is OH,  $OR^{18}$  or  $CH_3$

$R^{18}$  is  $CH_3$  or  $CH_2CH_3$

$R^{19}$  is  $R^{20}-(EO)_m-(PO)_n-R^{21}$

$m$  is 3 to 25

$n$  is 0 to 10

$R^{20}$  is the direct bond or  $CH_2CH(R^{22})(CH_2)_pR^{23}$

$p$  is 1 to 4

$R^{21}$  is H,  $R^{24}$ ,  $CH_2CH(R^{22})NH_2$  or  $CH(R^{22})CH_2NH_2$

$R^{22}$  is H or  $CH_3$

$R^{23}$  is O or NH

$R^{24}$  is linear or branched  $C_1-C_8$  alkyl or  $Si(R^{25})_3$

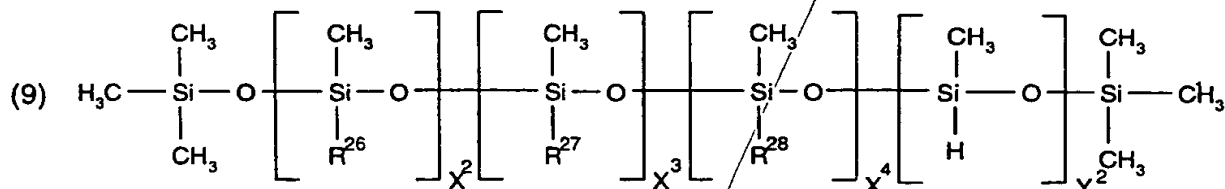
$R^{25}$  is  $R^{24}$ ,  $OCH_3$  or  $OCH_2CH_3$

EO is  $-\text{CH}_2\text{CH}_2\text{O}-$

PO is  $-\text{CH}(\text{CH}_3)\text{CH}_2\text{O}-$  or  $-\text{CH}_2\text{CH}(\text{CH}_3)\text{O}-$

the sum of  $X_1, Y_1$  and  $S$  is 20 to 1500;

or a dispersed polyorganosiloxane of the formula (9)



wherein

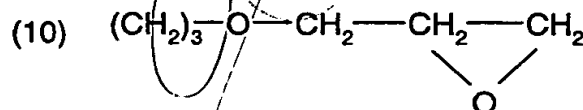
$\text{R}^{26}$  is linear or branched  $\text{C}_1 - \text{C}_{20}$  alkoxy,  $\text{CH}_2\text{CH}(\text{R}^4)\text{R}^{29}$

$\text{R}^4$  is as previously defined

$\text{R}^{29}$  is linear or branched  $\text{C}_1 - \text{C}_{20}$  alkyl

$\text{R}^{27}$  is aryl, aryl substituted by linear or branched  $\text{C}_1 - \text{C}_{10}$  alkyl, linear or branched  $\text{C}_1 - \text{C}_{20}$  alkyl substituted by aryl or aryl substituted by linear or branched  $\text{C}_1 - \text{C}_{10}$  alkyl

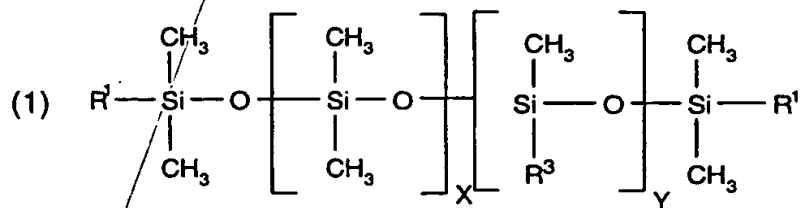
$\text{R}^{28}$  is



the sum of  $X^2, X^3, X^4$  and  $Y^2$  is 20 to 1500, wherein  $X^3, X^4$  and  $Y^2$  may be independently of each other 0;

or a mixture thereof.

2. A method of use according to claim 1 wherein the polyorganosiloxane is of formula (1):



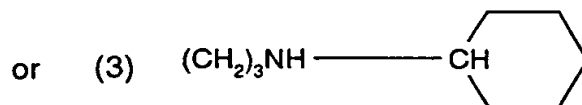
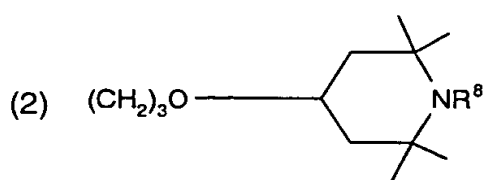
wherein

$\text{R}^1$  is  $\text{OH}$ ,  $\text{OR}^2$  or  $\text{CH}_3$

$\text{R}^2$  is  $\text{CH}_3$  or  $\text{CH}_2\text{CH}_3$

$\text{R}^3$  is  $\text{C}_1 - \text{C}_{20}$  alkoxy,  $\text{CH}_3$ ,  $\text{CH}_2\text{CHR}^4\text{CH}_2\text{NHR}^5$ , or

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$\text{R}^4$  is H or  $\text{CH}_3$

$\text{R}^5$  is H,  $\text{CH}_2\text{CH}_2\text{NHR}^6$ ,  $\text{C}(=\text{O})-\text{R}^7$

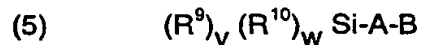
$\text{R}^6$  is H or  $\text{C}(=\text{O})-\text{R}^7$

$\text{R}^7$  is  $\text{CH}_3$ ,  $\text{CH}_2\text{CH}_3$  or  $\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$

$\text{R}^8$  is H or  $\text{CH}_3$

the sum of X and Y is 40 to 1500

or a dispersed polyorganosiloxane which comprises at least one unit of the formula (5);



wherein

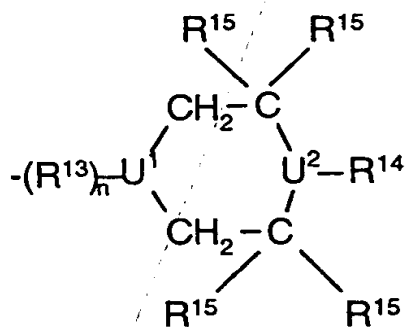
$\text{R}^9$  is  $\text{CH}_3$ ,

$\text{R}^{10}$  is  $-\text{O}-\text{Si}$  or  $-\text{O}-\text{R}^9$

the sum of v and w equals 3, and v does not equal 3

$\text{A} = -\text{CH}_2\text{CH}(\text{R}^{11})(\text{CH}_2)_k$

$\text{B} =$



n is 1

U<sup>1</sup> is CH

k is 0 to 6

R<sup>11</sup> is H or CH<sub>3</sub>

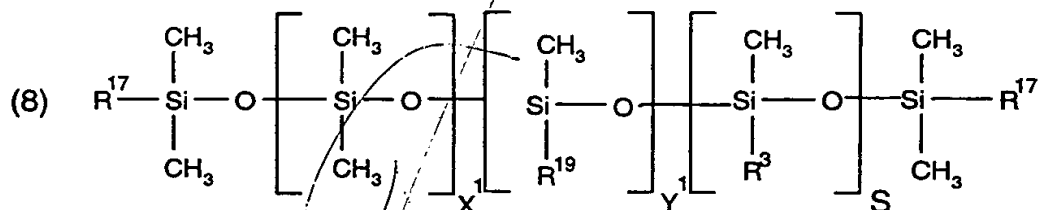
R<sup>13</sup> is OOCN(Butyl)

R<sup>14</sup> is H, linear C<sub>1</sub>-C<sub>4</sub> alkyl, Phenyl

R<sup>15</sup> is H or linear C<sub>1</sub>-C<sub>4</sub> alkyl

U<sup>2</sup> is N

or a dispersed polyorganosiloxane of the formula (8);



wherein

R<sup>3</sup> is as previously defined

R<sup>17</sup> is OH, OR<sup>18</sup> or CH<sub>3</sub>

R<sup>18</sup> is CH<sub>3</sub> or CH<sub>2</sub>CH<sub>3</sub>

R<sup>19</sup> is R<sup>20</sup>-(EO)<sub>m</sub>-(PO)<sub>n</sub>-R<sup>21</sup>

m is 3 to 25

n is 0 to 10

R<sup>20</sup> is the direct bond or CH<sub>2</sub>CH(R<sup>22</sup>)(CH<sub>2</sub>)<sub>p</sub>R<sup>23</sup>

p is 1 to 4

R<sup>21</sup> is H, R<sup>24</sup>, CH<sub>2</sub>CH(R<sup>22</sup>)NH<sub>2</sub> or CH(R<sup>22</sup>)CH<sub>2</sub>NH<sub>2</sub>

R<sup>22</sup> is H or CH<sub>3</sub>

R<sup>23</sup> is O or NH

R<sup>24</sup> is linear or branched C<sub>1</sub>-C<sub>3</sub> alkyl or Si(R<sup>25</sup>)<sub>3</sub>

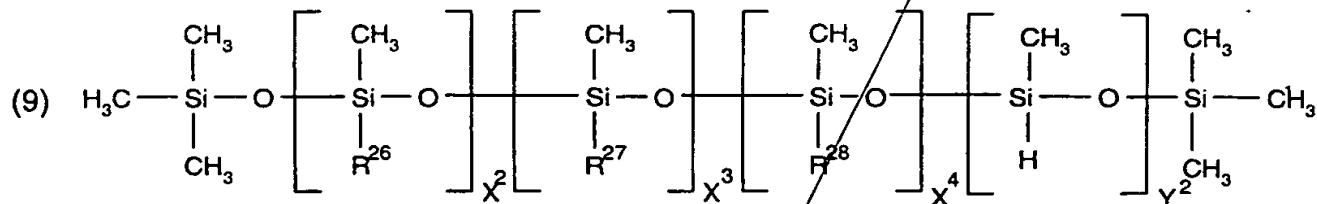
R<sup>25</sup> is R<sup>24</sup>, OCH<sub>3</sub> or OCH<sub>2</sub>CH<sub>3</sub>

EO is -CH<sub>2</sub>CH<sub>2</sub>O-

PO is -CH(CH<sub>3</sub>)CH<sub>2</sub>O- or -CH<sub>2</sub>CH(CH<sub>3</sub>)O-

the sum of X<sub>1</sub>, Y<sub>1</sub> and s is 40 to 1500

or a dispersed polyorganosiloxane of the formula (9);



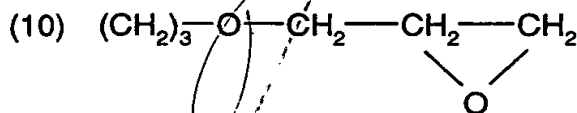
R<sup>26</sup> is linear C<sub>1</sub> - C<sub>20</sub> alkoxy, CH<sub>2</sub>CH(R<sup>4</sup>)R<sup>29</sup>

R<sup>4</sup> is as previously defined

R<sup>29</sup> is linear C<sub>1</sub> - C<sub>20</sub> alkyl

R<sup>27</sup> is, CH<sub>2</sub>CH(R<sup>4</sup>)Phenyl

R<sup>28</sup> is



the sum of X<sup>2</sup>, X<sup>3</sup>, X<sup>4</sup> and Y<sup>2</sup> is 40 to 1500, wherein X<sup>3</sup>, X<sup>4</sup> and Y<sup>2</sup> may be independently of each other 0;

or a mixture thereof.

3. A method of use according to claim 1 or 2 wherein a polyorganosiloxane of formula (1) is used, wherein

R<sup>1</sup> is OH or CH<sub>3</sub>,

R<sup>3</sup> is CH<sub>3</sub>, C<sub>10</sub>-C<sub>20</sub>alkoxy or CH<sub>2</sub>CHR<sup>4</sup>CH<sub>2</sub>NHR<sup>5</sup>,

R<sup>4</sup> is H,

R<sup>5</sup> is H or CH<sub>2</sub>CH<sub>2</sub>NHR<sup>6</sup>,

R<sup>6</sup> is H or C(=O)-R<sup>7</sup>, and

R<sup>7</sup> is CH<sub>3</sub>, CH<sub>2</sub>CH<sub>3</sub> or especially CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH.

4. A method of use according to claim 1 or 2 wherein a polyorganosiloxane of formula (8) is used, wherein

R<sup>3</sup> is CH<sub>3</sub>, C<sub>10</sub>-C<sub>20</sub>alkoxy or CH<sub>2</sub>CHR<sup>4</sup>CH<sub>2</sub>NHR<sup>5</sup>,

R<sup>4</sup> is H,

$R^5$  is H or  $\text{CH}_2\text{CH}_2\text{NHR}^6$ ,

$R^6$  is H or  $\text{C}(=\text{O})\text{-R}^7$ ,

$R^7$  is  $\text{CH}_2\text{CH}_3$ ,  $\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$  or especially  $\text{CH}_3$ , and

$R_{17}$  is  $\text{CH}_3$  or OH.

5. A method of use according to claim 1 or 2 wherein a polyorganosiloxane of formula (9) is used, wherein

$R^{26}$  is  $\text{CH}_2\text{CH}(\text{R}^4)\text{R}^{29}$ ,

$R^4$  is H, and

$R^{27}$  is 2-phenyl propyl.

6. A method of use according to any of claims 1 to 5 wherein the composition is a liquid aqueous composition.

7. A method of use according to any of claims 1 to 6 wherein the composition is used in a tumble dryer sheet composition.

8. A method of use according to any of claims 1 to 7 in which the polyorganosiloxane is nonionic or cationic.

9. A method of use according to any of claims 1 to 8 in which the composition has a solids content of 5 to 70 % at a temperature of  $120^\circ\text{C}$ .

10. A method of use according to any of claims 1 to 9 in which the composition contains a water content of 25 to 90 % by weight based on the total weight of the composition.

11. A method of use according to any of claims 1 to 10 in which the composition has a pH value from 2 to 7.

12. A method of use according to any of claims 1 to 11 in which the nitrogen content of the aqueous emulsion due to the polyorganosiloxane is from 0 to 0.25 % with respect to the silicon content.



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13. A method of use according to any of claims 1 to 12 wherein the composition comprises a polyethylene, a fatty acid alkanolamide or a polyurethane.

14. A method of use according to any of claims 1 to 13 wherein the composition comprises a polyethylene or a fatty acid alkanolamide.

15. A method of use according to any of claims 1 to 14 wherein the composition comprises a fatty acid alkanolamide.

16. A method of use according to any of claims 1 to 14 wherein the composition comprises a polyethylene.

17. A method of use according to any of claims 1 to 16 wherein the composition is prepared by mixing a preformulated fabric softener with an emulsion comprising the polyorganosiloxane and the additive.

18. A method of use according to any of claims 1 to 17 wherein composition has a clear appearance.

19. A method of use according to any of claims 1 to 18 in which the composition comprises:

- a) 0.01 to 70 % by weight, based on the total weight of the composition, of a polyorganosiloxane, or a mixture thereof;
- b) 0.2 to 25 % by weight based on the total weight of an emulsifier, or a mixture thereof;
- c) 0.01 to 15 % by weight based on the total weight of at least one additive selected from the group consisting of a polyethylene, a fatty acid alkanolamide, a polysilicic acid and a polyurethane, and
- d) water to 100 %.

20. A tumble dryer sheet comprising a composition as defined in claim 1.

add  
all